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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* SOUMYA ROY, LAUREN SHIMEK,
JEAN L. WEBER, and ONDINE BAIRD

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Appeal 2010-006054
Application 10/799,397
Technology Center 1700

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Before CHARLES F. WARREN, TERRY J. OWENS, and
BEVERLY A. FRANKLIN, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 6-19, 23-45 and 57-62, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

*The Invention*

The Appellants claim a dry mix composition and batter for making a bakery product, and claim a fried bakery product and method for making it. Claims 1 and 35 are illustrative:

1. A dry mix composition for use in a bakery product, comprising:

about 50% to about 80% flour;

a leavening system; and

about 0.1 % to about 1.0% encapsulated acid; wherein the encapsulated acid having a mean particle size of about 150 microns to about 840 microns is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, sodium acid sulfate and mixtures thereof.

35. A method for preparing a bakery product, comprising the steps of:

A. providing a dry mix, said mix on a dry weight basis comprising:
about 50% to about 80% flour;
a leavening system; and
about 0.01% to 1.0% encapsulated acid;

B. forming a batter comprising:
said dry mix;
a moisture, in a ratio of dry mix to moisture of about 50:1 to about 1:1;

C. allowing the leavening system to react in said batter;

D. depositing individual-serving size portions of said batter into heated oil;

E. deep-frying the batter in oil having a temperature of about 270°F to about 400°F to produce a fried bakery product, wherein the fried bakery product achieves an internal cooked temperature of about 170°F to about 230°F; and

wherein said fried bakery products have a yeast-free and mold-free shelf life of at least 21 days.

*The References*

| | | |
|---|---|---|
| Willyard | 4,929,464 | May 29, 1990 |
| Narayanaswamy | 6,165,524 | Dec. 26, 2000 |
| Navarro | 6,312,741 B1 | Nov. 6, 2001 |

*The Rejections*

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 6-19, 23 and 24 over Narayanaswamy in view of Navarro and claims 35-45 and 57-62 over Narayanaswamy in view of Navarro and Willyard.

OPINION

We affirm the rejections.

We limit our discussion to the claims which the Appellants argue separately. Claims not separately argued stand or fall with the argued claim from which they depend. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Narayanaswamy discloses a batter containing about 10-40 wt% flour, 5 to about 30 wt% moisture and, in certain embodiments, a conventional chemical leavening system (col. 4, ll. 21-22; col. 7, ll. 39-40; col. 10, ll. 7-9). "In a preferred method of preparation, a preblend of the dry ingredients is made" (col. 10, ll. 42-43). The batter can be used to make baked goods and skillet items such as pancakes, crepes or waffles (col. 8, ll. 19-25; col. 12, ll. 25-29).

Navarro discloses "an encapsulated acid which provides an acid environment to a baked bread product without deleteriously affecting the bread dough before baking" (col. 1, ll. 7-10). The encapsulated acid comprises coated fumaric acid having a mean particle size from about 70 μ to about 140 μ, most preferably about 105 μ, and is present in bread dough in an amount of about 0.1 to about 0.7 wt% (col. 3, ll. 50-56; col. 4, ll. 10-

14). The coating preferably has a melting point above 125 ºF (col. 3, ll. 57-58). "The size of the coated fumaric acid particulate and its size consistency are of significant importance because the surface area of a particle directly relates to its time-solubility profile" (col. 5, ll. 35-38).

*Claims 1, 6-17, 19, 23 and 25-34*

The Appellants argue that one of ordinary skill in the art would not have added Navarro's encapsulated acid to Narayanaswamy's batter because Narayanaswamy desires storage stability of batter (col. 1, ll. 14-16) whereas Navarro's encapsulated acid provides storage stability to baked products (col. 1, ll. 7-10) (Br. 9; Reply Br. 2).

"A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). In making an obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418. One of ordinary skill in the art would have appreciated that storage stability of not only Narayanaswamy's batter but also Narayanaswamy's baked or fried product would be desirable. Therefore, such a person would have been led by Navarro to add Navarro's encapsulated acid to Narayanaswamy's batter to increase the storage stability of the baked or fried product.

The Appellants argue that neither Narayanaswamy nor Navarro discloses a dry mix composition (Br. 9; Reply Br. 2). The Appellants state that their invention resides in the discovery that adding encapsulated acid to a dry mix for preparing a batter lowers the pH during frying or baking without reacting with leavening, increases the antimicrobial effectiveness of preservatives such as benzoic acid, propionic acid and sorbic acid, and can

impart antimicrobial benefits, thereby extending the shelf life of the finished product (Spec. ¶ 13).

Narayanaswamy's preferred method for making the batter is to prepare a dry mix preblend and then add the liquid ingredients to it (col. 10, ll. 42-48). Because Navarro's encapsulated acid is a dry component, one of ordinary skill in the art, when adding it to Narayanaswamy's batter to obtain the improved storage stability of the baked or fried product pointed out above, would have added it to Narayanaswamy's dry preblend. Navarro indicates that the encapsulated fumaric acid provides the benefits observed by the Appellants, i.e., it delays the release of the encapsulated acid until baking or frying and thereby lowers the pH of the product during baking or frying without reacting with the leavening, provides a product pH which preserves the antimicrobial effect of other antimicrobial acids such as sorbic acid and benzoic acid, and imparts its own antimicrobial effect, thereby increasing the finished product's shelf life (col. 1, ll. 11-21, 27-32, 55-56; col. 2, ll. 25-26; col. 3, ll. 6-16, 36-40).

The Appellants also argue a number of claim limitations other than the addition of encapsulated acid to a dry mix wherein they consider their invention to reside.

The Appellants argue that neither Narayanaswamy nor Navarro discloses a dry mix containing about 50 to about 80 wt% flour (Br. 9; Reply Br. 2).

As pointed out by the Examiner (Ans. 4), Narayanaswamy's batter contains about 10-40 wt% flour and 5 to about 30 wt% moisture (col. 4, ll. 21-22; col. 7, ll. 39-40). Thus, the flour can be present in the dry mix preblend in an amount as high as about 57 wt%, which falls within the

Appellants' range of about 50 to about 80 wt%. Use of amounts within the overlapping ranges would have been prima facie obvious to one of ordinary skill in the art. *See In re Geisler,* 116 F.3d 1465, 1469-70 (Fed. Cir. 1997); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980); *In re Malagari*, 499 F.2d 1297, 1303 (CCPA 1974).

The Appellants argue that neither Narayanaswamy nor Navarro discloses an encapsulated acid mean particle size of about 150 to about 840 μ (Br. 9; Reply Br. 2). The Appellants argue that Navarro's range of about 70 to about 140 μ (col. 3, ll. 51-52) is not "about" a range of 150-840 μ (Br. 10).

The Appellants' particle size range is not 150-840 μ but, rather, is about 150 to about 840 μ. As pointed out by the Appellants (Br. 10), "about" means "approximately" or "nearly". Thus, Navarro's mean particle size of about 140 μ includes values somewhat above 140 μ and, therefore, appears to include values within the Appellants' mean particle size of about 150 μ which includes values somewhat below 150μ. Moreover, although, as pointed out by the Appellants (Br. 11), Navarro prefers mean particle sizes below about 140 μ (col. 3, ll. 50-56), Navarro teaches that the acid release rate is related to the mean particle size (col. 5, ll. 35-38; col. 6, ll. 15-33). Hence, Navarro would have led one of ordinary skill in the art who desired a higher release rate than that preferred by Navarro to use larger particles such that the surface to volume ratio is lower and, therefore, the release rate is higher.

*Claims 35-37 and 40-45*

Willyard discloses a cake donut batter which is prepared from a dry mix and is deep fried for about 100 seconds at 350 °F (col. 1, ll. 56-58; col. 2, ll. 15-18; col. 4, ll. 26-27).

The Appellants argue that Willyard discloses reheating donuts in a microwave at 150 °F (col. 4, ll. 48-50) and that the applied references do not disclose deep frying to an internal temperature of about 170 to about 230 °F (Br. 16-17; Reply Br. 5).

Willyard's disclosure that the donuts are deep fried at 350 °F appears to be suggestive of internal temperatures such as about 170 to about 230 °F. Moreover, it appears that Narayanaswamy's disclosure that the batter can be fried in a skillet (col. 12, ll. 28-29) would have led one of ordinary skill in the art to use the desired fat or grease depth, including depths which cover the batter, and to fry the batter to the desired degree of doneness such as to an internal temperature of about 170 to about 230 °F.[1]

*Claims 18, 24, 57 and 62*

The Appellants argue that Navarro's disclosure of a coating melting point above 125 °F (col. 3, ll. 57-58) does not meet the Appellants' requirement of a minimum coating melting point of 150 °F (Br. 12, 15, 19-20, 22).

Navarro's disclosure of a coating melting point above 125 °F would have suggested melting points within that range including the Appellants'

[1] The Appellants' argument (Br. 17-19) that the references would not have suggested the mean particle size of about 150 to about 840 μ required by claim 37 is not persuasive for the reason given above regarding the rejection of claim 1.

150 °F. Moreover, a comparison of the Appellants' Specification (¶ 0049) and Navarro (col. 3, l. 62 – col. 4, l. 2) shows that the Appellants' list of coating materials appears to have been copied from Navarro. It is not apparent how none of Navarro's coating materials can have the melting point of the Appellants' coating material when the coating materials of Navarro and the Appellants are the same.

*Claims 38, 39 and 58-61*

The Appellants argue that the applied references would not have suggested a product shelf life of at least 21 days (claim 58) or at least 30 days (claim 38) (Br. 19-21).

Because Navarro's encapsulated acid extends shelf life (col. 5, ll. 6-9) and the Appellants' exemplified encapsulated acid (fumaric acid, Spec. ¶ 0048) and the Appellants' coating materials and amount of coating material are the same as those of Navarro (Spec. ¶ 0049; Navarro, col. 3, ll. 40-41; col. 3, l. 62 – col. 4, l. 7), it appears that Navarro's encapsulated acid would provide the same shelf life improvement as that of the Appellants.

The Appellants argue that the claim 61 requirement that the fried bakery product is a cake donut is not addressed by the Examiner (Br. 21).

Willyard, which the Examiner relies upon for a disclosure of the deep frying required by claim 58 from which claim 61 depends (Ans. 7-9), discloses a fried cake donut (col. 1, ll. 51-54).

DECISION/ORDER

The rejections under 35 U.S.C. § 103 of claims 1, 6-19, 23 and 24 over Narayanaswamy in view of Navarro and claims 35-45 and 57-62 over Narayanaswamy in view of Navarro and Willyard are affirmed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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